

10/522490

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IN THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of the Claims:

1. (Original) An overwound munitions casing incorporating an annulus of a shape memory alloy which has been subjected to a combination of mechanical and thermal treatments and which has a composition such that upon subsequent heating to a predetermined temperature, said annulus will contract radially inwardly and rupture the said munitions casing.
2. (Currently Amended) A casing as claimed in claim 1 wherein the annulus is comprised of one of a solid ring of shape memory alloy and a plurality of windings of shape memory alloy in wire form.
3. (Cancelled)
4. (Currently Amended) A casing as claimed in ~~any one of the preceding claims~~ claim 1, wherein the shape memory alloy to form the annulus is stretched or expanded at a temperature below the predetermined temperature prior to fitting on the munitions casing.
5. (Currently Amended) A casing as claimed in ~~any one of the preceding claims~~ claim 1, wherein the shape memory alloy is selected from Cu-Al-Zn, Cu-Al-Ni, Cu-Ni-Al-Zn-Mn, Cu-Zn-Al-Mn and Ti-Ni alloys.
6. (Currently Amended) A casing as claimed in ~~any one of the preceding claims~~ claim 1, wherein a cutting means is located between the annulus and the casing and is arranged, such that in use, the radially inward force exerted by the annulus is concentrated onto a relatively small area of the munitions casing.

7. (Original) A casing as claimed in claim 6, wherein the cutting means may be selected from a spike, blade or sharp edge.
8. (Currently Amended) A casing as claimed in claim 6 ~~or claim 7~~ wherein the cutting means is retained in a retracted position prior to use, such that it is not in direct contact with said casing.
9. (Cancelled)
10. (Cancelled)
11. (Currently Amended) A casing as claimed in claim 10 1, wherein the internal heating is afforded by one of resistive ohmic heating of the annulus, ~~by~~ direct application of a current, ~~or by~~ and inductive heating.
12. (Currently Amended) A casing as claimed in ~~any one of the preceding claims~~ claim 1 wherein the annulus is a wire winding and is wound within a housing which is located around the casing.
13. (Cancelled)
14. (Cancelled)
15. (Cancelled).
16. (Cancelled).
17. (Currently Amended) A method of rupturing a munitions case comprising locating at least one annulus as described in ~~any one of~~ claims 1 to 16, around the outer surface of a munitions

casing, causing an external or internal heating means to be applied to said at least one annulus, wherein the at least one annulus is caused to rupture the munitions casing.

18. (Currently Amended) A ~~connection means~~ connector for joining together separate components to form a unified munitions casing for containment of an energetic material, wherein locking engagement can be provided between an integral operative part of said ~~connection means~~ connector and an integral co-operative part of at least one of said components wherein either or both of the operative and co-operative parts is or are made of a shape memory alloy which occupies a first configuration at a first temperature and undergoes a change of shape when brought to a second temperature, to afford a second configuration, said operative and co-operative parts providing locking engagement at the first temperature and allowing release from said locking engagement at the second temperature, wherein the second temperature is greater than the first temperature but is lower than the temperature of ignition of the energetic material.
19. (Currently Amended) A ~~connection means~~ connector as claimed in claim 18, wherein the operative and co-operative parts respectively comprise either one or more projections and one or more complementary recesses.
20. (Cancelled).
21. (Cancelled).
22. (Cancelled).
23. (Currently Amended) A ~~connection means~~ connector for joining together separate components to form a unified body wherein locking engagement can be provided between an integral operative part of said ~~connection means~~ connector and an integral co-operative part of at least one of said components wherein either or both of the operative and co-operative parts is or are made of a shape memory alloy which occupies a first configuration at a first

temperature and undergoes a change of shape when brought to a second temperature, to afford a second configuration, said operative and co-operative parts providing locking engagement at the first temperature and allowing release from said locking engagement at the second temperature, wherein the operative and co-operative parts are provided with complementary threads.

24. (Currently Amended) A ~~connection means~~ connector as claimed in ~~any one of claims 18 to 23~~ claim 23, which is separate from the two components.
25. (Currently Amended) A ~~connection means~~ connector as claimed in claim 24, which forms a structural and load bearing joint between the two components when in locking engagement therewith.
26. (Currently Amended) A ~~connection means~~ connector as claimed in ~~any one of claims 18 to 23~~ claim 23, wherein each of the operative and co-operative parts is integral with one of the two components.
27. (Currently Amended) A ~~connection means~~ connector as claimed in ~~any one of claims 18 to 26~~ claim 23, wherein only the operative part of said ~~connection means~~ connector is made of a shape memory alloy.
28. (Currently Amended) A ~~connection means~~ connector as claimed in ~~any one of claims 18 to 26~~ claim 23, wherein both the operative and the co-operative parts are comprised wholly or partially of a shape memory alloy.
29. (Currently Amended) A ~~connection means~~ connector as claimed in ~~any one of claims 18 to 28~~ claim 23, wherein the second configuration is expanded with respect to the first configuration.

30. (Currently Amended) A ~~connection means connector~~ as claimed in ~~any one of claims 18 to 28~~ claim 23, wherein the second configuration is contracted with respect to the first configuration.
31. (Currently Amended) A ~~connection means connector~~ as claimed in claim ~~28~~ 23, wherein either the operative or co-operative parts will be expanded in its second configuration and the co-operative and operative parts respectively will be contracted in its second configuration.
32. (Currently Amended) A ~~connection means connector~~ as claimed in ~~any one of claims 18 to 31~~ claim 23, wherein said ~~connection means connector~~ reversibly joins the two components, such that the original components and ~~connection means connector~~ can be recovered.
33. (Cancelled).
34. (Currently Amended) A ~~connection means connector~~ as claimed in ~~any of claims 18 to 22 or claim 33~~ claim 23, wherein the ~~connection means connector~~ has a second temperature greater than the first temperature but which is lower than the temperature of ignition of the energetic material.
35. (Cancelled).
36. (Cancelled).
37. (Currently Amended) A ~~connection means connector~~ as claimed in ~~any of claims 33 to 36~~ claim 23, wherein the shape metal alloy has a transition temperature range which lies in the range of 80°C -150°C.
38. (Cancelled).

39. (Currently Amended) A ~~connection means~~ connector as claimed in ~~any of claims 18 to 38~~
~~claim 23~~, wherein the shape metal alloy has an expansion/contraction strain of at least 1%,

40. (Original) A ~~connection means~~ connector as claimed in claim 39, wherein the shape metal
alloy has an expansion/contraction strain of at least 2%.

41. (Currently Amended) A munitions casing comprised of at least two parts connected together
by a ~~connection means~~ connector as claimed in ~~any of claims 18 to 22 or claim 33~~ claim 23
~~when dependent thereon~~.

42. (Cancelled).

43. (Cancelled).

44. (Currently Amended) A munition comprising a munitions casing as claimed in ~~any of claims~~
~~41 to 43~~ claim 41 and containing an energetic material.

45. (Cancelled).

46. (Cancelled).

47. (Cancelled)

48. (Cancelled)

49. (New) A munition comprising a connector according to claim 18.